and dithiothreitol;

concentrating the Hepatitis C virus helicase to a concentration of about 12-16mg/mL;

combining concentrated Hepatitis C virus helicase with the ligand in a mixture comprising about 4% by weight to about 14% by weight PEG and about 5% by weight to about 15% by weight DMSO; and

growing a co-crystal by vapor diffusion.

33. The method of claim 32 wherein combining the concentrated Hepatitis C virus helicase with the ligand in a mixture comprising PEG and DMSO and growing the co-crystal are performed in the absence of potassium phosphate.

34. The method of claim 32 wherein the ligand binds to an NTP binding site on the Hepatitis C virus helicase.

35. A method for crystallizing a Hepatitis C virus helicase molecule or molecular complex comprising growing a crystal by vapor diffusion with macro-seeding from a precipitant solution comprising purified Hepatitis C virus helicase, HEPES, and about 4% by weight to about 14% by weight mono-alkyl ether of PEG.

36. A method for co-crystallizing a Hepatitis C virus helicase molecule and a ligand to yield a molecular complex, comprising growing a crystal by vapor diffusion with macro-seeding from a precipitant solution comprising purified HCV helicase, HEPES, about 4% by weight to about 14% by weight mono-alkyl ether of PEG, and the ligand, wherein the ligand binds to at least one oligonucleotide binding site on the Hepatitis C virus helicase.

37. The method of claims 31-36 wherein the amino acid sequence of the Hepatitis C virus helicase is SEQ ID NO:1.

38. Crystalline Hepatitis C virus helicase comprising a tetragonal crystal having unit cell dimensions of a = b = 109 Å ± 3 Å; c = 84 Å ± 2 Å; $\alpha = \beta = \gamma = 90°$; and space group $P4_1$; the unit cell containing two molecules in an asymmetric unit.

39. The crystalline Hepatitis C virus helicase of claim 38 wherein the amino acid sequence of Hepatitis C virus helicase is SEQ ID NO:1.

40. Crystalline Hepatitis C virus helicase comprising an orthorhombic crystal characterized by unit cell dimensions of a = 66 Å ± 2 Å; b = 110 Å ± 3 Å; c = 64 Å ± 2 Å; $\alpha = \beta = \gamma = 90°$; and a space group $P2_12_12$; the unit cell containing one molecule in the asymmetric unit.

41. The crystalline Hepatitis C virus helicase of claim 40 wherein the amino acid sequence of Hepatitis C virus helicase is SEQ ID NO:1.

42. **(Amended)** Crystalline Hepatitis C virus helicase having **[an]** amino acid sequence **[is]** SEQ ID NO:1.

43. A composition comprising crystalline Hepatitis C virus helicase of any of claims 38-42.

47. A method for incorporating a chemical entity in a crystal comprising placing a tetragonal crystal of Hepatitis C virus helicase having unit cell dimensions of a = b = 109 Å ± 3 Å; c = 84 Å ± 2 Å; $\alpha = \beta = \gamma = 90°$; and space group $P4_1$ in an aqueous solution comprising about 1mM to about 10mM chemical entity, and 0% by weight to about 15% by weight DMSO.

48. A method for incorporating a chemical entity in a crystal comprising placing an orthorhombic crystal of Hepatitis C virus helicase having unit cell dimensions of a = 66 Å ± 2 Å; b = 110 Å ± 3 Å; c = 64 Å ± 2 Å; $\alpha = \beta = \gamma = 90°$; and a space group $P2_12_12$ in an aqueous

solution comprising about 1mM to about 10mM chemical entity, and 0% by weight to about 15% by weight DMSO.

49. **(New)** Crystalline Hepatitis C virus helicase wherein the amino acid sequence of Hepatitis C virus helicase is SEQ ID NO:1.